

What Is Claimed Is:

1. A channel down mixing apparatus for a car audio system, which has a channel down mixing function for down mixing a sub-woofer signal to an L (left) channel and an R (right) channel when a user does not select a sub-woofer speaker, the apparatus comprising:

a pair of buffers for amplifying an L channel input signal and an R channel input signal to a designated gain, respectively;

a pair of FETs for mixing the sub-woofer signal with the L channel input signal and the R channel input signal when the user does not select the sub-woofer speaker, and for outputting a mixed signal to each of the buffers;

a first transistor being turned on when the user turns on the sub-woofer speaker; and

a second transistor and a third transistor, which are turned off when the first transistor is turned on and turned off when the first transistor is turned on, reducing the L channel input signal and the R channel input signal to a designated level, respectively.

2. A channel down mixing apparatus for a car audio system, which has a channel down mixing function for down mixing a sub-woofer signal to an L (left) channel and an R (right) channel when a user does not select a sub-woofer speaker, the apparatus comprising:

a pair of buffers for amplifying an L (left) channel input signal and an R (right) channel input signal to a designated gain, in which a resistor is serially inserted before the respective buffers;

a pair of FETs for mixing the sub-woofer signal with the L channel input signal

and the R channel input signal when the user does not select the sub-woofer speaker,
and for outputting a mixed signal to each of the buffers;

a pair of parallel resistors connected in parallel to the serial resistors that are
inserted between an output end of each of the FET and an input end of the buffer;

5 a first transistor being turned on when the user turns on the sub-woofer speaker;
and

a second transistor and a third transistor, which are turned off when the first
transistor is turned on and turned off when the first transistor is turned on, wherein the
second and third transistors earth each of the parallel resistors when turned on, thereby
10 reducing the level of the L channel input signal and the R channel input signal by a
resistance ratio of the serial resistor to the parallel resistor.